Framing Climate Change Through Social Media: A Case Study of Cloudburst Incidents

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ABSTRACT

Through a disastrous cloudburst event in mid-August 2025, this article examines how social media portrays climate change in Pakistan. Particularly in catastrophe scenarios, media and social media frequently depict cloudbursts, rapid and heavy localized rainfall, in an expressive manner. Cloudburst-like circumstances, exacerbated by climate change, caused abrupt flash floods and landslides in August 2025 in several parts of Khyber Pakhtunkhwa, including Buner, Swat, Bajaur, and Shangla. Using framing theory, this study examines how Pakistani users discuss the incident on social media sites including Facebook, Twitter, and TikTok, paying particular attention to frames related to scientific correctness, vulnerability, responsibility, and resilience. This study uses qualitative content analysis focusing on certain frames covered by social media discussions on flooding and cloudburst.

Keywords: Cloudburst, flooding, climate change, social media, framing.

INTRODUCTION

Although there has been a global increase in awareness of environmental issues and climate change over the past two decades, creating suitable and influential public opinion is still a key concern (Khanya, 2019).

Numerous environmental movements have emerged as a result of the more tangible effects of climate change, and social media is a key platform for public discourse in these efforts (Khanya, 2019).

Social media influencers are important players who can sway public opinions and preferences by presenting compelling stories in a personal way. Social media influencers are people with a sizable following and reputation in a certain industry, such fashion, technology, beauty, or lifestyle, who have a big impact on digital platforms. Influencers serve as a more genuine and intimate link between brands and customers in the marketing context than traditional advertising. Because of their visual attractiveness, relatable stories, and direct engagement with the audience. Using influencers in marketing methods, such on TikTok, has been demonstrated to enhance customer purchasing interest (Citrawijaya & Jannah, 2025).

The selection of the most crucial topics for media coverage is heavily influenced by agenda-setting and media choices. The media in Pakistan is mainly focused on regional topics like politics and security.

When shaping media agendas, climate change is frequently overlooked. It was crucial to note that the media agenda is heavily reliant on higher audience and profits (Khan, Aslam, Safdar, & Tariq, 2024).

Numerous elements, such as media coverage, cultural beliefs, individual experiences, and sociopolitical situations, all have an impact on how the general public perceives climate change. The public's perception and comprehension of climate change in the United States have fluctuated significantly over time, frequently due to media narratives and political rhetoric (Leiserowitz, Maibach, Roser-Renouf, & Rosenthal, 2018).

Since climate change cannot be limited within the purview of the traditional natural sciences, it has opened the social and communication sciences to embrace it as a complicated subject. In order to accurately inform the public, particularly on climate change issues, the media takes on a crucial role in mediating between scientific research and the general public. It accomplishes this within a range of scientific, economic, political, and human-interest frames (Javed, Sultan, & Siddiqua, 2024).

Since the 1980s, climate change has drawn a lot of public attention and grown to be a major area of study for academics, reflecting its increasing importance to societies around the world (Moser, 2024). This focus emphasizes how serious climate change is for both people and communities (Adam, Reber, Häussler, & Schmid-Petri, 2020) A critique of previous studies indicates that media control and political elites' interests align to greatly influence the reporting of climate change (Reser & Bradley, 2020).

In addition, the media focuses more on climate change in major global events but less so outside of global events (Ahmed, Zounemat-Kermani, & Scholz, 2020). Climate change images are overemphasized in media, which tends to distort the perception of the masses. In addition, public opinion and the political discourse of climate change are highly shaped by media coverage (Hase, Mahl, Schäfer, & Keller, 2021). Most nations are extremely worried about climate change, and Pakistan, a developing country of nearly 220 million inhabitants, is the seventh most vulnerable nation (Ejaz, Ittefaq, & Arif, 2024). More monsoon variability, the impact of receding Himalayan glaciers on the Indus River system, reduced capacity of reservoirs, reduced hydropower in droughts, and severe weather conditions such as floods and droughts, and food insecurity are some of the climate-linked problems Pakistan is confronted with (Ahmed, Zounemat-Kermani, & Scholz, 2020).

There is notable regional and temporal fluctuation in the country's varied climate, which stretches from the Arabian Sea to the Himalayan Mountains (Abbass, et al., 2022). The main hydrometeorological resource in Pakistan is the monsoon rains, which account for 59% of the country's yearly rainfall (Ahmed, Zounemat-Kermani, & Scholz, 2020).

Pakistan's mild climate, location in an area with above-average temperature increases, primarily desert and semi-arid terrain, and reliance on the retreating Hindu Kush, Karakoram, and Himalayan glaciers for river flow all contribute to its sensitivity to climate change (Habib, 2021). Large floods, protracted droughts, and monsoon variability pose threats to the nation's agrarian economy, which is extremely vulnerable to climate change (Schäfer & Schlichting, 2018).

Research Objectives

- To access the key frames on social media discussion on flooding and cloudburst in Pakistan
- To find the narrative surrounding climate change while covering floods in Pakistan

Research Questions

1. Which frames are most prevalent in the social media discussion on the floods caused by cloudbursts in 2025?

2. What is the key narrative surrounding climate change while covering floods in Pakistan?

LITERATURE REVIEW

According to the analysis, editorials from Dawn and Jang strategically frame coverage of floods and climate change similarly, emphasizing "floods," "environmental conferences," and "agriculture," with a particular emphasis on the monsoon season (Umber, Chaudhary, & Latif, 2023).

Climate change is posing significant issues for Pakistan. The average temperature in Pakistan has increased by almost 0.5°C over the previous 50 years. Over the past 30 years, there has been a significant increase in the number of extremely hot days. Over the past 50 years, there has been a modest rise in the annual rainfall. Over the last century, the sea level has risen by roughly 10 centimeters close to Karachi. Pakistan's temperature may rise by 3 to 5 degrees Celsius by the end of this century, and with increased global emissions, it may rise by 4 to 6 degrees. It is anticipated that rainfall will differ significantly from year to year. By the end of the century, the sea level might rise by an additional 60 centimeters (Javed & Khan, 2019).

It was only after many delays when media started covering climate change as an issue. Studies show that during later half of the 20th century media organizations started mentioning terms such as "climate change" and "greenhouse" (Boykoff & Luedecke, 2016).

Particularly in Pakistan, media coverage on climate change has increased from zero to an average of roughly 146 stories per month in print media (Ejaz, Ittefaq, & Arif, 2022).

The quantity of news reports alone, however, is insufficient to raise the urgently needed level of climate awareness. Any single media message's impact is examined by considering its functionality in combination with the message's source, the recipients' varied characteristics (such as age, gender, and psychographics), the context, and the channel through which it is delivered, all of which contribute to the overall effect (Javed, Basit, & Hussain, 2020).

For ratings and financial gain, Pakistani news outlets focus on "crispy news." Climate change is also not a top political priority in Pakistan, in contrast to America. Instead of creating a significant impact, this frequently reduces climate-related stories to just meeting quotas. As a result, a variety of factors impact the choice of news items and their perspectives. Likewise, a careful analysis of the factors affecting how climate-related news is covered in Pakistan is necessary (Manzoor & Ali, 2021).

Social media is a game-changing digital technology that has transformed public discourse and communication (Olaniyan & Akpojivi, 2021). Traditional social boundaries have been dismantled, opening up new avenues for public discussion of important topics like climate change (Meikle, 2024). Public issue communication has changed as a result of social media's influence on society (Vasylchyshyn, Storozhenko, Babkova, Kuchmenko, & Kovalchuk, 2024).

The public and politicians are informed by the media, which is crucial in molding public opinion. Because of its wide-ranging influence, the mass media is a vital resource for current events and world news (Reser & Bradley, 2020).

Because of the industry's strong desire for sensational and political news, media outlets and stakeholders are unconcerned about this gap in journalism. Programs feature ignorant visitors who don't fully address the topics by concentrating on the most obvious details while neglecting more delicate, connected topics. Warm weather is the primary feature of climate change news, with little attention paid to the wider effects on other industries (Javed, Basit, Hussain, & Shahwar, 2020).

Prior research has also identified climate illiteracy as a major barrier to its coverage. Journalists' lack of training and experience has an impact on how environmental concerns are covered. A major contributing factor to Pakistan's climate-related projects' failure. Inadequate climate reporting in Pakistan is caused by a number of factors, including a lack of access to technology, a lack of information and resources for advance reporting, and a communication gap between climate scientists and journalists (Jan, Khan, & Mahsud, 2020).

METHODOLOGY

This research uses qualitative content analysis technique to examine the social media reportage on climate change particularly cloudburst in Pakistan. While using framing theory this study has used following frames to analyze the coverage of 2025 cloudburst and floods in Pakistan.

Frames	Narratives
Mass Destruction	Emotional impact, Infrastructural damage, death toll, livestock etc.
Religious frame	Punishment of God, Bad deeds of humans, distance from God, refusing His authority, lack of fear of God
Climate change	An outcome of climate change, glacier melting, global warming, man led degradation of environment.
Government negligence	Mishandling by government, no prior warning, bias of federal government, lack of mitigation policy etc.
Rehabilitation efforts	Self-support, local and community contribution, other government led efforts
Disinformation Other	Fake news, misleading facts, false narrative Frame containing any content that did not fall into one of these particular categories, Memes, humor etc.

FINDINGS AND DISCUSSION

Mass Destruction

Social media is fueled by images, and the volume of images and films depicting disaster can lead to an overabundance of images that may give the impression that the destruction is more extensive. This is an illustration of how the catastrophe is "constructed" in the minds of people. Every picture of buildings being submerged by flooding or highways being destroyed by cloudbursts intensifies the sense of anarchy. With reference to the current catastrophic floods caused by heavy rains and cloudburst, social media coverage has been found to be framing it destructive. Most of the posts, particularly, videos shared on various social media platforms show the mass destruction caused by rains and floods. We may examine how social media intensifies emotional reactions like shock, terror, and pity by using qualitative content analysis. Pictures of groups living in tents, children being rescued, or individuals trekking through floodwaters can evoke strong emotional reactions. Sensational language sometimes exacerbates these sentiments by intensifying the sense of mass catastrophe.

Social media posts' emotional tone frequently reflects a collective experience in which people show grief for the loss of life and property, worry for the future, and solidarity. This widespread emotional response influences how people discuss future resilience—or lack thereof—in the face of climate-induced disasters and becomes a part of the broader conversation surrounding the tragedy. Social media handling of the recent floods caused by cloudburst and heavy rains has seen to the sensational attractions among the social media enthusiasts.

Religious frame

Recent floods in Pakistan have attracted widespread media coverage on social media, and religious aspects have played an important role in framing, analyzing, and explaining such disasters. Social media messages that frame and talk about these tragedies tend to mirror individuals' moral and spiritual perceptions of such disasters. Analysis of religious frames applied in these social media messages shows major themes that bring together social and cultural constructions of the disaster as well as religious beliefs.

One of the most common religious explanations is that natural disasters are expressions of God's will. In Islam, natural disasters like floods are interpreted as being tests by God or the result of the combined actions of human beings. Posts on social media may consist of publishing Hadiths or religious sayings from the Quran giving reasons about natural disasters as an act of testing by God. Perhaps the floods remind us of man's frailty, a call for atonement, or a call to renew belief. Tweets may contain such lines as:

"And We sent the winds, and the floods came. as a punishment for their deeds."

"Do not despair, for after hardship comes ease."

The idea of "divine testing" was coupled with thoughts of self- or collective goodness, and the deluge had the function of reminding the individual of his/her position in God's eyes. Swarms of posts were focused on the requirement to better oneself, and adherence to religious obligations like prayer and charity.

Another common discursive frame among social media is the belief that floods are a manifestation of God's wrath for the immorality of individuals, groups, or even countries. Natural disasters are sometimes seen in Islamic society as having been caused by immorality, corruption, or carelessness.

For instance, social media posts claimed that the recent floods were God's wrath for social injustice, sweeping corruption, or lack of regard for conservation of the environment. Belief that "we have strayed from the path of righteousness" and that repentance and reform are called for in order to earn divine mercy accompany the disaster's enormity.

Under these circumstances, it is common to find calls for repentance by the group, prayer, and benevolent acts (e.g., donating towards flood relief). Islamic practice teaches that the two most significant methods of responding to such disasters are through repentance (Tawbah) and alms-giving (Sadaqah). Religious organizations can highlight their roles of mercy and kindness (Sadaqah) during the floods. Social media users often cite Islamic teachings of helping others in need, particularly in disaster or emergency situations.

Climate change

Climate change framing has increasingly taken over social media reports on the recent floods in Pakistan, mirroring how such tragedies are interpreted in the context of environmental shifts occurring worldwide. Such frames seek to move the public discourse towards action and awareness by highlighting the connection between instances of extreme weather and human-caused climate change.

The letter is usually introduced as a result of global warming in many social media posts highlighting the link between the incidence and climate change. Green organizations, activists, and social media bloggers see the record magnitude of the floods as proof of the accelerating impacts of climate change in South Asia.

Citizens prefer sharing videos and infographics showing how increasing global temperatures lead to strengthening monsoon seasons, irregular patterns of rain, and unusual weather events like cloudbursts causing floods. Hashtags #ClimateCrisis, #ClimateChange, #PakistanFloods, and #ActOnClimate have been popular to share the same.

A few social media posts linked the floods as resulting from human activity, such as deforestation, rampant growth, and farming extension into floodplains, rather than as an entirely natural phenomenon. Environmental degradation, such as wetland draining and poor waste management, is said to make areas more susceptible to flooding. A powerful frame circulating on social media associates the floods with the theme of climate justice. Possessing an extremely low carbon footprint, Pakistan is among the nations most exposed to the effects of climate change and thus is a symbol of the unfairness of such effects globally. In order to highlight this inequality, infographics comparing the carbon emission of countries like the United States and China against the devastation wrought by floods in Pakistan are widely shared.

The inequity of how poorer nations are suffering the brunt of destruction caused primarily by industrialized nations is commonly raised in social media.

Although there is much controversy regarding the cause of the floods, it is also emerging that there needs to be improved disaster preparedness and climate adaptation. Posts call for investing in flood defense systems, enhancing early warning systems, and constructing resilient infrastructure to prevent the devastating effects of future climate disasters.

Government Negligence

The government's abdication in responding to the recent floods in Pakistan has been a big issue of debate on social media. These blogs, which typically blame the absence of planning, the late response, and the inadequate relief efforts, frame the government's actions (inaction) as failure to protect civilians and respond to the gravity of the situation. Social media have been used by opposition leaders, activists, and citizens to voice their irritation and demand accountability.

The perceived lag in providing flood victims swift assistance is one of the leading causes of dissatisfaction. Social media messages often call attention to how critical aid, such as food, water, medical treatment, and rescue operations, was delayed in the initial stages of the disaster.

Users indicated their frustration with the government's response by sharing images of families stuck and houses underwater. These articles are often accompanied by hashtags such as #GovernmentFailure, #WhereIsTheHelp, or #RescueNow. Contrary to life on the ground, posts often contain images of victims waiting for help, roads that have been completely washed away, and politicians delivering speeches.

The inability of the Pakistani government to prepare adequately for floods despite consistent warnings from climate experts and meteorologists is a recurring topic on social media. Dams, drainage systems, and flood barriers are all types of flood control infrastructure that have come under criticism for poor maintenance or being incapable of standing up to such extreme weather conditions.

People on social media contrasted the vulnerabilities of Pakistan with those of countries with better flood control measures.

Statements are often made highlighting how destruction had been brought about by old or poorly constructed flood barricades and infrastructure. The other more common topic is comparing the present flood response of Pakistan with previous floods. People on social media indicate that the government has not learned from past tragedies and continues to make the same mistakes year in and year out. Most people believe that the inertia proves there is rampant carelessness.

Rehabilitation activities

Twitter reporting of recent floods in Pakistan concentrated largely on relief and recovery operations by the community.

Though the government's response has attracted flak, other blogs highlight the resilience of the communities and solidarity as much as the efforts of volunteers, NGOs, and local groups to provide short-term relief and long-term rehabilitation. Social media platforms have been immensely useful in raising support, spreading awareness, and documenting these efforts. The story of local communities coming together to help each other in the midst of the floods has been one of the top trending stories on social media. Neighbors, families, and villages mobilizing local rescue teams, pooling food, and sheltering the displaced are some of the frequently shared stories on social media. Many of the neighborhood leaders, consisting of youngsters groups, spiritual figures, and tribal elders, have been positioned withinside the highlight on social media for his or her function in organizing and coordinating the healing efforts. These leaders have been regularly proven as beacons of movement and hope, displaying the tremendous affect that network management can exercising withinside the midst of tragedy.

For instance A village elder withinside the Dir village turned into featured on a famous publish. He coordinated the distribution of supplies, presented advice, and coordinated the network's reaction to the floods.

Disinformation

In others, speculation, unsubstantiated photographs, or fake statistics on social media is used to in addition the narrative of enormous devastation. This can be wrong information approximately the loss of life toll or quantity of destruction, that could restrict alleviation and aid efforts. Social media's velocity and scope make it tough to manage, which at instances generates worry or confusion over the significance of destruction.

Social media became in flames with messages at some point of the floods that made unsubstantiated claims that authorities and non-governmental businesses had been ineffective, unresponsive, or participating in comfort thieving.

These claims regularly have become viral, sowing mistrust and intensifying public frustration. Tweets additionally pretended to depict authorities functionaries hoarding comfort materials, despite the fact that they have been really doctored or older photos of unrelated events. Public belief of the relaxation attempt changed into marred because of those posts being shared en masse with out verification. False posts can probably undermine public self belief in authorities packages and resource groups, main to a disintegrate of cooperation and donor fatigue. Image and video manipulation or mislabeling is one of the maximum not unusualplace sorts of deception. One should submit a surprising picturegraph of flooding destruction this is clearly from a exceptional catastrophe (perhaps a 12 months in the past or some thing unrelated). These photographs ought to extend the sensation of devastation and trick humans into wondering the catastrophe is larger. Footage of floods from preceding years or different countries (e.g., Bangladesh or India) changed into broadly released, with a few people feeling that the situation in Pakistan turned into worse than it genuinely became in a few parts. In a few cases, pictures of TV dramas or films became used as actual pictures. Following a disaster, incorrect information concerning loss of life tolls can unfold

rapidly, inducing needless worry. By exaggeration or spreading unsubstantiated reports, a few social media handles overrated the variety of casualties. Individuals who desired to sensationalize the incident or advantage interest regularly wrote such posts.

Other

Like maximum herbal disasters, social media become on hearthplace with memes and funny posts along severe dialogue and humanitarian motion in the course of the latest flooding in Pakistan.

Such content material has the capacity to be cathartic at some point of a disaster, however it increases essential questions of sensitivity, ethics, and the function of humor in catastrophe reporting. Besides mentioning the shortage of good enough infrastructure, a meme concerning flooded roads with the caption, "Not all heroes put on capes, a few simply pressure boats," centered on neighborhood rescue operations and emphasised network resiliency. Discussion concerning how era can fail withinside the occasion of emergencies might have been initiated with the aid of using such kinds of memes.

CONCLUSION

How the current cloudbursts and floods in Pakistan have been perceived on social media serves to underscore the strengths and weaknesses of on-line boards in shaping how the general public perspectives and responds to herbal disasters.

Social media, via its myriad posts documenting grassroots comfort efforts, volunteer work, and cohesion for the duration of hardship, performed an critical function in constructing network resilience. These snap shots highlighted the humanitarian reaction and confirmed the altruism of people who substituted for legitimate equipment whilst it broke down. Social media become additionally a vital manner for giving in-actual-time updates, calling interest to the severity of the disaster and supporting to pay attention help in which it changed into needed. The framing additionally uncovered the drawback of social media reporting. Most of the posts mocked the authorities' reaction, specializing in political problems and authorities incompetence. Such a portrayal regularly heightened irritation, undermining public consider and polarizing society. Often, weather extrade turned into painted as the primary culprit, highlighting the developing environmental disaster due to weather extrade even as every now and then simplifying the basis causes, that are terrible infrastructure and nearby mismanagement. Furthermore, the unfold of incorrect information, from spurious numbers of deaths to manipulative photographs, contributed to confusion and apprehension, distracting interest from real efforts in the direction of restoration. Overall, social media meditated at the floods a complicated blend of activism, sympathy, and criticism, which underscored the ability of on-line media to enlighten and to mislead.

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